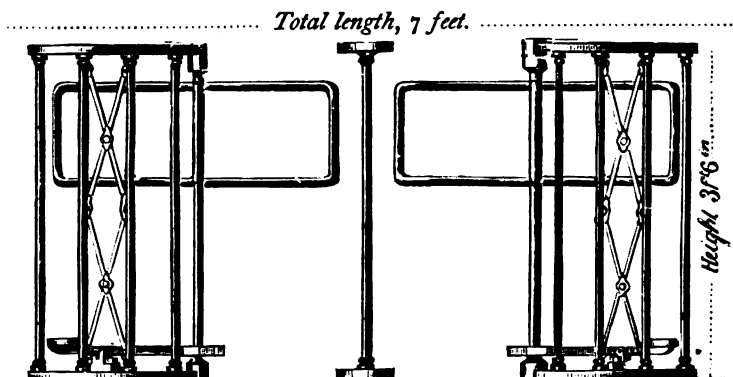


## NORTON'S PATENT IMPROVED REGISTERING TURNSTILES.



Applicable to Toll Bridges, Theatres, Public Gardens, Steamboat Piers, Factories where large numbers of men are employed, Racecourse Enclosures, Cricket Grounds, and Exhibitions of all kinds where money is taken on admission, or where it is desired to ascertain the numbers entering.

Independent of their value as a security against fraud, it is found that the adoption of these Instruments is a matter of positive economy, as it permits the employment of a less expensive class of money-takers, and when re-admission by pass tickets is not allowed, saves the whole expense of check-takers.

Eight of the Patent Instruments were in use during the whole of the first Dublin Exhibition, and twelve at the last one, without the least derangement, or a single error occurring: and forty-two are in constant use at the Crystal Palace, with a like result.

They have been adopted in India and other Cotton and Rice-growing countries, for counting the labourers as they pass through with "bales," &c., securing great accuracy.

NOTE.—The above Engraving shows two of these Turnstiles with a Division, or Middle Rail separating them—a plan frequently adopted in their use.

## PRICES:

|  | £  | s. | d. |
|--|----|----|----|
| Registering Turnstile .. .. .                      | 20 | 0  | 0  |
| Non-Registering Turnstile .. .. .                  | 18 | 0  | 0  |
| Middle Rail (if with Brass Arms, 12s. extra) .. .. | 2  | 10 | 0  |

## LE GRAND AND SUTCLIFF,

ARTESIAN WELL BORERS,

AND

PROPRIETORS OF NORTON'S PATENT "ABYSSINIAN" TUBE WELLS LETTERS PATENT,  
MAGDALA WORKS, 100, BUNHILL ROW, LONDON, E.C.

# "ABYSSINIAN" TUBE WELLS.

NORTON'S PATENT.

Without the need of any reservoir, these Wells, by the simple action of the pump, *draw their supply to them*; hence it has been incontestably proved that they will yield more than dug wells.

Where very large supplies of water are required they are obtained by driving two or more Wells at certain distances apart and joining them to one horizontal main, to which steam, or any other kind of pump, can be applied. On this plan, supplies, varying from 1000 to 40,000 gallons per hour, are now in daily use at Water Works, Breweries, Factories, Infirmaries, Railway Stations, &c.

Every description of pump, for either raising or forcing, hitherto employed with dug wells, or other sources of supply, can be used for the precisely similar purposes in connection with Norton's Patent Abyssinian Tube Wells.

Unlike dug wells, instead of collecting all surface drainage that can find its way into them, these Wells shut out all top percolation, and draw their supply direct from the bottom of the water-bearing seam, thereby ensuring the purest and most permanent supply possible to be obtained.

This isolation of objectionable seams can only be very imperfectly achieved under the old system, and then by a great outlay.

By this process Wells can be made in shifting sands (if there be a perceptible grit) by means of Filter Tubes, a feat which is next to an impossibility by any other known plan.

In addition to the ordinary "Abyssinian" Tube Well, which is suitable for all soils that are penetrable by percussion (for depths varying from 15 to 100 feet) without removing any earth, such as gravel, sand, chalk and flints, loam, soft clays, and all loose strata, there is the combined bored and driven "Abyssinian" Tube Well, which can be made to *any depth* and through *any strata*.

Some idea may be formed of the extent to which these Wells are employed when it is mentioned that Messrs. Allsopp, Bass, and other breweries in Burton-on-Trent alone are furnished with supplies on this system amounting to over *two million gallons per day of ten hours*.

## PRICES:

1½ in. 30 ft. WELL AND PUMP, £10; 2 in. 30 ft. WELL AND PUMP, £16; 3 in. 30 ft. WELL, £22 15s.

*For Greater or Less Depths Quotations will be given on Application.*

Men's Time and Expenses, Railway Fares, and Carriage of Materials to and fro, in all operations, Extra.

EXPORT.—Large quantities of these Wells are annually exported to all parts of the world, and full Printed and Illustrated Directions for Driving are furnished with them. Special Quotations for Wells and Driving Apparatus for Abroad furnished on application.

## LE GRAND AND SUTCLIFF,

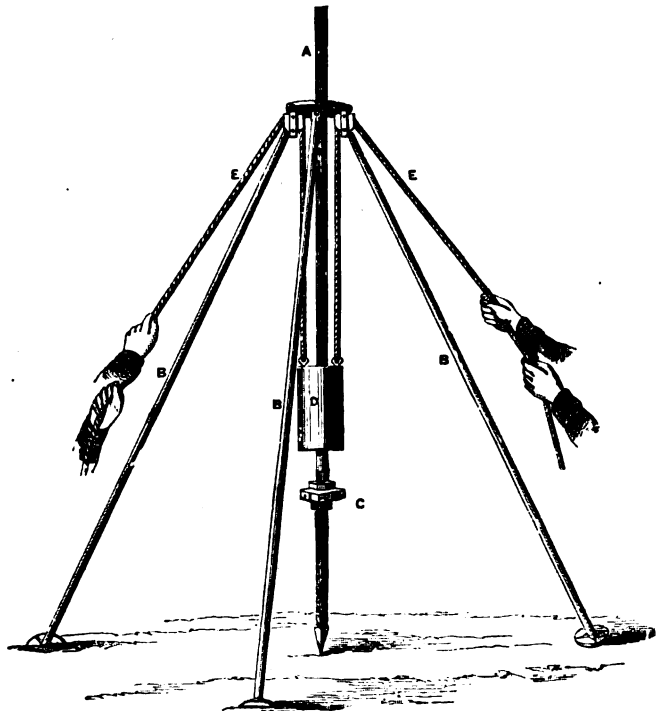
ARTESIAN WELL BORERS,

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PROPRIETORS OF NORTON'S PATENT "ABYSSINIAN" TUBE WELLS LETTERS PATENT

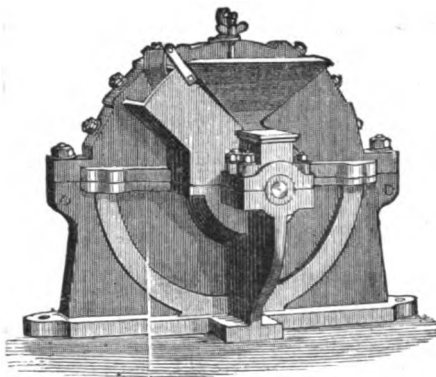
(Contractors to H.M. War Department, the Crown Agents for the Colonies, &c.),

MAGDALA WORKS, 100, BUNHILL ROW, LONDON, E.C.



# GRINDING AND DISINTEGRATING MILL.

NORTON AND HAWKSLEY'S PATENT.



This Mill unquestionably supersedes all others hitherto introduced for the purpose of GRINDING and CRUSHING, as it accomplishes its work with rapidity and perfection, and is so universal in its adaptation that there are few substances (no matter how hard) which cannot be reduced more rapidly, more perfectly, and with less cost and wear and tear, than by any other known process.

Of the numerous advantages possessed by the Machine, one of the most important is its great durability under very severe tests ; the cost by wear and tear being nominal even in reducing so hard a substance as coprolites : this important feature has been obtained by making provision for the reversing and changing of the parts most subjected to wear, and for renewing them entirely (when worn out) at a mere nominal cost. It will therefore be seen that every provision is made for ensuring a continuation of uniform and regular work (a desideratum never before obtained), such as enables the Patentees to challenge all competition.

Amongst the numerous substances it is capable of grinding will be found the following, viz. : Bones, Coprolites, Quartz, Shale, Coal, Coke, Rock or other Asphalte, Charcoal, Gypsum, Oyster Shells, Myrobalans, Nuts, Bark of every description, Acorns, Locust Beans, Linseed, Linseed Cake, Oat-husks, Wheaten Chaff, Mustard, Pepper, Dry Colours, Cork, Logwood, and all kinds of Dye Woods ; Maize, Beans, Peas, Tares, Lentils, Barley, Oats, and grain of any description can be ground much quicker, and at far less cost, than by ordinary millstones. Gorse, Hay, Straw, Bean and Pea Haulms, and all similar substances can be fed into the machine without being cut up by any previous process.

## PRICES:

|                    | £  | s. | d. |
|--------------------|----|----|----|
| Small Mill.. .. .  | 25 | 0  | 0  |
| Large Mill .. .. . | 70 | 0  | 0  |

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